Received by WCD: 5/25/2024 5:34:57 AM U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		Sundry Print Report 01/25/2024
Well Name: COTTON DRAW UNIT	Well Location: T25S / R32E / SEC 28 /	County or Parish/State:
Well Number: 653H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMLC061869	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002548722	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP

#### **Notice of Intent**

Sundry ID: 2766943

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Type of Submission: Notice of Intent

Date Sundry Submitted: 12/20/2023

Date proposed operation will begin: 12/20/2023

Type of Action: APD Change Time Sundry Submitted: 02:04

**Procedure Description:** Devon Energy Production Co., L.P. (Devon) respectfully requests to change the well name, SHL/BHL, and depth on the subject well. Please see attached revised C102, drill plan (break test variance included), and directional plan. Permitted Well name: MARWARI 21-16 STATE FED COM 624H Proposed Well name: COTTON DRAW UNIT 653H Permitted SHL: NENE 325 FNL, 715 FEL, 28-25S-32E Proposed SHL: NENE 175 FNL, 815 FEL, 28-25S-32E Permitted BHL: NENE 20 FNL, 1000 FEL, 16-25S-32E Proposed BHL: NENE 20 FNL, 990 FEL, 16-25S-32E Permitted TVD/MD: 11903/22204 - [98270] WC-025 G-08 S253216D; UPPER WOLFCAMP Proposed TVD/MD: 9323/19685 - [96715] WC-025 G-05 S253209L; BONE SPRING No new leases have been added since approved APD.

### **NOI Attachments**

#### **Procedure Description**

WA017743692\_COTTON\_DRAW\_UNIT\_653H\_WL\_R2\_20231220140434.pdf

Cotton\_Draw\_Unit\_653H\_Directional\_Plan\_12\_19\_23\_20231220124103.pdf

13.375\_54.50\_J55\_SEAH\_20231220124103.pdf

break\_test\_variance\_BOP\_20231220124103.pdf

Cotton\_Draw\_Unit\_653H\_20231220124102.pdf

5.5in\_x\_17.00lb\_P110EC\_DWC\_C\_IS\_PLUS\_\_\_5\_23\_2023\_20231220124101.pdf

9.625\_40lb\_J55\_SeAH\_20231220124101.pdf

Received by OCD: 1/25/2024 5:34:57 AM Well Name: COTTON DRAW UNIT	Well Location: T25S / R32E / SEC 28 / NENE /	County or Parish/State: Page 2 of 33
Well Number: 653H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMLC061869	Unit or CA Name:	Unit or CA Number:
<b>US Well Number:</b> 3002548722	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP

#### **Conditions of Approval**

#### Additional

Sundry\_ID\_2766943\_Cotton\_Draw\_Unit\_653H\_20240111142121.pdf

Cotton\_Draw\_Unit\_653H\_COA\_20240111142121.pdf

#### **Operator**

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

#### Operator Electronic Signature: SHAYDA OMOUMI

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Associate 3

Street Address: 333 W SHERIDAN AVE

City: OKLAHOMA CITY State: OK

Phone: (405) 235-3611

Email address: SHAYDA.OMOUMI@DVN.COM

State:

#### Field

Representative Name:

Street Address:

City:

Phone:

Email address:

### **BLM Point of Contact**

BLM POC Name: CHRISTOPHER WALLS BLM POC Phone: 5752342234 Disposition: Approved Signature: Chris Walls Signed on: DEC 20, 2023 02:04 PM

Zip:

BLM POC Title: Petroleum Engineer

BLM POC Email Address: cwalls@blm.gov

Disposition Date: 01/24/2024

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

		W	ELL LC			REAGE DEDIC	CATION PLA	<u>. T</u>				
1	API Number	r		<sup>2</sup> Pool Code								
30	-025-48	722		96715		WC-025 G-	05 S253209L;	BONE SPRIN	SPRING			
<sup>4</sup> Property (	Code				<sup>5</sup> Property	Name			<sup>6</sup> Well Number			
325998	3			653H								
<sup>7</sup> OGRID	No.		COTTON DRAW UNIT <sup>8</sup> Operator Name									
6137			<b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>									
<sup>10</sup> Surface Location												
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County			
Α	28	25 S	32 E		175	NORTH	815	EAST	LEA			
			n F	Bottom H	ole Location	If Different Fr	om Surface					
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County			
Α	16	25 S	32 E		20	NORTH	990	EAST LE				
<sup>2</sup> Dedicated Acre	s <sup>13</sup> Joint	or Infill <sup>14</sup>	Consolidatio	n Code		•	<sup>15</sup> Order No.					
320												

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

(A) N89'15'43"€ 2651.26 FT B N89'20'29"€ 264.70 FT C	COTTON DRAW UNIT 653H	17 OPERATOR CERTIFICATION
воттом 990' Е	EL. = 3384.8	I hereby certify that the information contained herein is true and complete
BOTTOM 8 OF HOLE 8	GEODETIC COORDINATES NAD 83 NMSP EAST	to the best of my knowledge and belief, and that this organization either
<sup>®</sup> ≥	SURFACE LOCATION N.= 403728.63	owns a working interest or unleased mineral interest in the land including
0.10	E.= 745444.71 LAT. = 32.1082136'N	the proposed bottom hole location or has a right to drill this well at this
SEC. 16	LONG. = 103.6741286'W	location pursuant to a contract with an owner of such a mineral or working
	KICK OFF POINT CALLS <u>46' FSL</u> , <u>963' FEL</u> FIRST TAKE POINT (PPP 1) 100' FSL, 990' FEL	interest, or to a voluntary pooling agreement or a compulsory pooling order
64.3.1	N = 403943 $N = 404001.60$	heretofore entered by the division.
	E.= 745295 LAT. = 32.10871093 LONG. = -103.67469082 LONG. = 103.67469082	Thanda Omount 12/19/2023
рани и и и и и и и и и и и и и и и и и и		Signature Date
0 N89 31 59 ℃ 100 N89 05 44 € 2665.28 FT 2660.43 FT E	LAST TAKE POINT BOTTOM OF HOLE	Shayda Omoumi
2641.73	100' FNL, 990' FEL 20' FNL, 990' FEL N.= 414357.28 N.= 414437.26	Printed Name
	E.= 745223.67 E.= 745223.43 LAT. = 32.1374330'N LAT. = 32.1376529'N LONG. = 103.6746326'W LONG. = 103.6746318'W	shayda.omoumi@dvn.com
N-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	PPP 2 PPP 3	E-mail Address
$\mathbb{O} + - \frac{SEC}{NMLC 0061869} - + - \mathbb{O}$	0'FNL, 984'FEL 2646'FSL, 987'FEL N.= 409179.06 N.= 411824.17	
2641.20 F	E.= 745245.70 E.= 745234.45 LAT. = 32.1231990*N LAT. = 32.1304699*N	<b>ISURVEYOR CERTIFICATION</b>
2 E 36	LONG. = 103.6746637*W LONG. = 103.6746478*W CORNER COORDINATES TABLE	I hereby certify that the well location shown on this plat
A. 21, 102,005	NAD 83 NMSP EAST A - N.= 414403.87 E.= 740898.71 B - N.= 414438.01 E.= 743549.18	was plotted from field notes of actual surveys made by
	C - N.= 414468.64 E.= 746213.12 D - N.= 411837.10 E.= 746221.18	me or under my supervision, and that the same is true
	E - N.= 409194.57 E.= 746229.47 F - N.= 406553.45 E.= 746242.49	and correct to the best of my belief.
	G - N.= 403912.78 E.= 746258.05 H - N.= 401272.46 E.= 746280.66	OCTOBER 31, 2023
25.2.	I – N.= 398632.65 E.= 746300.54 J – N.= 398599.50 E.= 743641.83	Date of Survey
SEC: 28	K - N.= 398579.22 E.= 740986.41 L - N.= 401215.68 E.= 740967.06 M - N.= 403829.87 E.= 740937.30	NEW MEL
	N - N.= 405429.67 E.= 740920.33 O - N.= 406130.33 E.= 740905.34	AND
640.46	P - N = 411767.40 E = 740902.02 Q - N = 409152.64 E = 743569.95	
N NMNM 115422	R - N.= 403882.79 E.= 743598.11	Signature and Seal of Professional Surveyor:
00.52.		Certificate Number:
₩ 589'33'45'W 2656.07 FT (J) 589'17'08'W 2659.49 FT (J)	— — — — — QUARTER LINE — — — LEASE LINE — — — WELL PATH	PROFEDENTED 5888B
©	WELL PAIN	

#### Received by OCD: 1/25/2024 5:34:57 AM

Х	As Drilled
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API #		
Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	COTTON DRAW UNIT	653H

#### Kick Off Point (KOP)

UL P	Section 21	Township 25S	Range 32E	Lot	Feet 46	From N/S SOUTH	Feet 963	From E/W EAST	County LEA
Latitude					Longitude		NAD		
32.10871093				-103.6746908	-103.67469082			83	

#### First Take Point (FTP)

UL P	Section 21	Township 25S	Range 32E	Lot	Feet 100	From N/S SOUTH	Feet 990	From E/W EAST	County LEA
	Latitude 32.1089669			Longitude <b>103.6746</b>	6948			NAD 83	

#### Last Take Point (LTP)

UL A	Section 21	Township 25S	Range 32E	Lot	Feet 100	From N/S NORTH	Feet 990	From E/W EAST	County LEA
Latitude					Longitud	le		NAD	
32.1374330				103.6	103.6746326			83	

Is this well the defining well for the Horizontal Spacing Unit? N

Is this well an infill well?

Y	

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-025-49135			
Operator Name:		Property Name:	Well Number
DEVON ENERGY PRODU COMPANY, L.P.	JCTION	COTTON DRAW UNIT	238H

KZ 06/29/2018



## <u>13-3/8"</u> <u>54.50#</u> <u>.380</u> <u>J-55</u>

## **Dimensions (Nominal)**

Outside Diameter	13.375	in.
Wall	0.380	in.
Inside Diameter	12.615	in.
Drift	12.459	in.
Weight, T&C	54.500	lbs/ft
Weight, PE	52.790	lbs/ft

### Performance Ratings, Minimum

Collapse, PE	1130	psi
Internal Yields Pressure		
PE	2730	psi
STC	2730	PSI
BTC	2730	psi
Yield Strength, Pipe Body	853	1000 lbs
Joint Strength, STC	514	1000 lbs
Joint Strength, BTC	909	1000 lbs

Note: SeAH Steel has produced this specification sheet for general information only. SeAH does not assume liability or responsibility for any loss or injury resulting from the use of information or data contained herein. All applications for the material described are at the customer's own risk and responsibility.



## **Connection Data Sheet**

OD (in.)	WEIGHT (lbs./ft.)	WALL (in.)	GRADE	DRIFT (in.)	RBW%	CONNECTION
5.500	Nominal: 17.00 Plain End: 16.89	0.304	VST P110 EC	4.767	87.5	DWC/C-IS PLUS

#### PIPE PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.892	in.
Nominal Area	4.962	sq.in.
Grade Type	API 5CT	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Tensile Strength	135	ksi
Yield Strength	620	klb
Ultimate Strength	670	klb
Min. Internal Yield	12,090	psi
*High Collapse*	8,840	psi

#### **CONNECTION PROPERTIES**

Connection Type	Semi-Premium T&C	
Connection OD (nom)	6.300	in.
Connection ID (nom)	4.892	in.
Make-Up Loss	4.125	in.
Coupling Length	9.250	in.
Critical Cross Section	4.962	sq.in.
Tension Efficiency	100.0%	of pipe
Compression Efficiency	100.0%	of pipe
Internal Pressure Efficiency	100.0%	of pipe
External Pressure Efficiency	100.0%	of pipe

#### **CONNECTION PERFORMANCES**

Yield Strength	620	klb
Parting Load	670	klb
Compression Rating	620	klb
Min. Internal Yield	12,090	psi
*High Collapse*	8,840	psi
Maximum Uniaxial Bend Rating	104.2	°/100 ft
Ref String Length w 1.4 Design Factor	26,050	ft

#### FIELD TORQUE VALUES

Min. Make-up Torque	13,400	ft.lbs
Opti. Make-up Torque	14,350	ft.lbs
Max. Make-up Torque	15,300	ft.lbs
Min. Shoulder Torque	1,340	ft.lbs
Max. Shoulder Torque	10,720	ft.lbs
Max. Delta Turn	0.200	Turns
Max Operational Torque	17,200	ft.lbs
Maximum Torsional Value (MTV)	18,920	ft.lbs

#### For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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05/23/2023 4:15 PM



VAM USA 2107 CityWest Boulevard Suite 1300 Houston, TX 77042 Phone: 713-479-3200 Fax: 713-479-3234 VAM USA Sales E-mail: <u>VAMUSAsales@vam-usa.com</u> Tech Support E-mail: tech.support@vam-usa.com

#### DWC Connection Data Notes:

- 1. DWC connections are available with a seal ring (SR) option.
- 2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
- 3. Connection performance properties are based on nominal pipe body and connection dimensions.
- DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
- 5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
- 6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
- 7. Bending efficiency is equal to the compression efficiency.
- 8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
- 9. Connection yield torque is not to be exceeded.
- Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
- 11. DWC connections will accommodate API standard drift diameters.
- 12. DWC/C family of connections are compatible with API Buttress BTC connections. Please contact tech.support@vam-usa.com for details on connection ratings and make-up.

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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# **SěAH** 9.625" 40# .395" J-55

## **Dimensions (Nominal)**

Outside Diameter	9.625	in.
Wall	0.395	in.
Inside Diameter	8.835	in.
Drift	8.750	in.
Weight, T&C	40.000	lbs./ft.
Weight, PE	38.970	lbs./ft.

## **Performance Properties**

Collapse, PE	2570	psi
Internal Yield Pressure at Minimum Yield		
PE	3950	psi
LTC	3950	psi
BTC	3950	psi
Yield Strength, Pipe Body	630	1000 lbs.
Joint Strength		
STC	452	1000 lbs.
LTC	520	1000 lbs.
втс	714	1000 lbs.

Note: SeAH Steel has produced this specification sheet for general information only. SeAH does not assume liability or responsibility for any loss or injury resulting from the use of information or data contained herein. All applications for the material described are at the customer's own risk and responsibility.

#### Section 2 - Blowout Preventer Testing Procedure

#### Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of the 10M BOPE to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow OOGO2.III.A.2.i, and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed OOGO2.III.A.2.i per the following: Devon Energy will perform a full BOP test per OOGO2.III.A.2.i before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. Break test will be a 14 day interval and not a 30 day full BOPE test interval. If in the event break testing is not utilized, then a full BOPE test would be conducted.

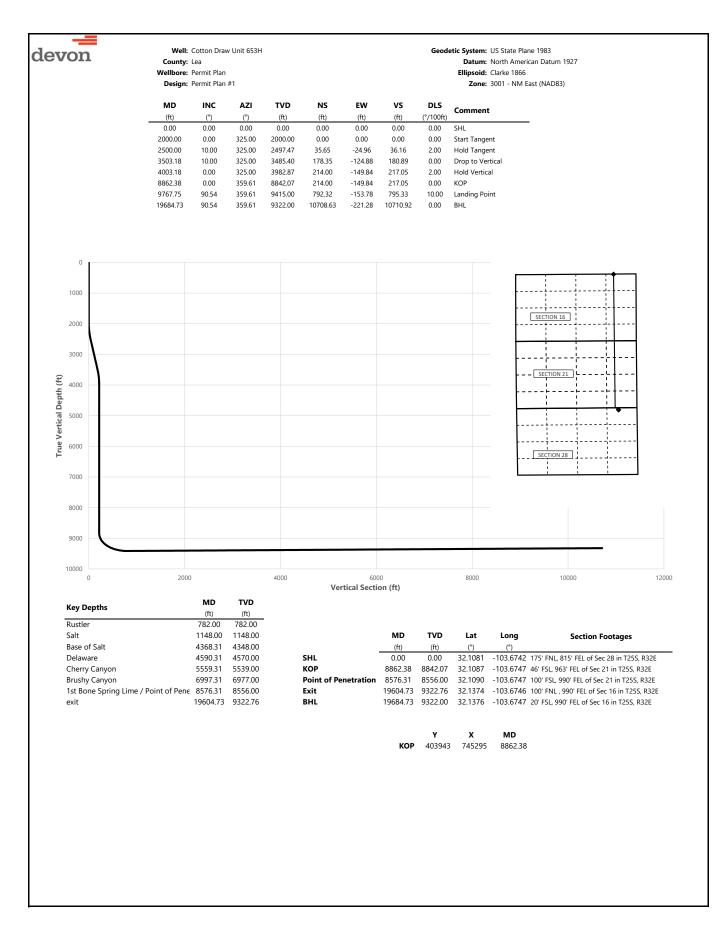
1. Well Control Response:

1. Primary barrier remains fluid

2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing BOPE is as follows:

- a) Annular first
- b) If annular were to not hold, Upper pipe rams second (which were tested on the skid BOP test)
- c) If the Upper Pipe Rams were to not hold, Lower Pipe Rams would be third





devon		Well:	Cotton Dra	w Unit 653H					Geodetic System: US State Plane 1983
devon		County:							Datum: North American Datum 1927
			Permit Plan						Ellipsoid: Clarke 1866
		Design:	Permit Plan	#1					Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	•
_	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
	100.00 200.00	0.00 0.00	325.00 325.00	100.00 200.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	300.00	0.00	325.00	300.00	0.00	0.00	0.00	0.00	
	400.00	0.00	325.00	400.00	0.00	0.00	0.00	0.00	
	500.00	0.00	325.00	500.00	0.00	0.00	0.00	0.00	
	600.00	0.00	325.00	600.00	0.00	0.00	0.00	0.00	
	700.00 782.00	0.00 0.00	325.00 325.00	700.00 782.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	Rustler
	800.00	0.00	325.00	800.00	0.00	0.00	0.00	0.00	Nuster -
	900.00	0.00	325.00	900.00	0.00	0.00	0.00	0.00	
	1000.00	0.00	325.00	1000.00	0.00	0.00	0.00	0.00	
	1100.00 1148.00	0.00 0.00	325.00 325.00	1100.00 1148.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	Salt
	1200.00	0.00	325.00	1200.00	0.00	0.00	0.00	0.00	Sait
	1300.00	0.00	325.00	1300.00	0.00	0.00	0.00	0.00	
	1400.00	0.00	325.00	1400.00	0.00	0.00	0.00	0.00	
	1500.00	0.00	325.00	1500.00	0.00	0.00	0.00	0.00	
	1600.00 1700.00	0.00 0.00	325.00 325.00	1600.00 1700.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	1800.00	0.00	325.00	1800.00	0.00	0.00	0.00	0.00	
	1900.00	0.00	325.00	1900.00	0.00	0.00	0.00	0.00	
	2000.00	0.00	325.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
	2100.00	2.00	325.00	2099.98	1.43	-1.00	1.45	2.00	
	2200.00 2300.00	4.00 6.00	325.00 325.00	2199.84 2299.45	5.72 12.86	-4.00 -9.00	5.80 13.04	2.00 2.00	
	2400.00	8.00	325.00	2398.70	22.84	-15.99	23.16	2.00	
	2500.00	10.00	325.00	2497.47	35.65	-24.96	36.16	2.00	Hold Tangent
	2600.00	10.00	325.00	2595.95	49.88	-34.92	50.59	0.00	
	2700.00 2800.00	10.00 10.00	325.00 325.00	2694.43 2792.91	64.10 78.32	-44.88 -54.84	65.01 79.44	0.00 0.00	
	2900.00	10.00	325.00	2891.39	92.55	-64.80	93.87	0.00	
	3000.00	10.00	325.00	2989.87	106.77	-74.76	108.30	0.00	
	3100.00	10.00	325.00	3088.35	121.00	-84.72	122.72	0.00	
	3200.00 3300.00	10.00 10.00	325.00 325.00	3186.83 3285.31	135.22 149.45	-94.68 -104.64	137.15 151.58	0.00 0.00	
	3400.00	10.00	325.00	3383.79	163.67	-114.60	166.00	0.00	
	3500.00	10.00	325.00	3482.27	177.90	-124.56	180.43	0.00	
	3503.18	10.00	325.00	3485.40	178.35	-124.88	180.89	0.00	Drop to Vertical
	3600.00	8.06	325.00	3581.02	190.80	-133.60	193.52	2.00	
	3700.00 3800.00	6.06 4.06	325.00 325.00	3680.26 3779.86	200.87 208.10	-140.65 -145.71	203.73 211.07	2.00 2.00	
	3900.00	2.06	325.00	3879.71	212.48	-148.78	215.51	2.00	
	4000.00	0.06	325.00	3979.69	214.00	-149.84	217.05	2.00	
	4003.18	0.00	325.00	3982.87	214.00	-149.84	217.05	2.00	Hold Vertical
	4100.00 4200.00	0.00 0.00	359.61 359.61	4079.69 4179.69	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	
	4300.00	0.00	359.61	4279.69	214.00	-149.84	217.05	0.00	
	4368.31	0.00	359.61	4348.00	214.00	-149.84	217.05	0.00	Base of Salt
	4400.00	0.00	359.61	4379.69	214.00	-149.84	217.05	0.00	
	4500.00 4590.31	0.00 0.00	359.61 359.61	4479.69 4570.00	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	Delaware
	4600.00	0.00	359.61	4579.69	214.00	-149.84	217.05	0.00	
	4700.00	0.00	359.61	4679.69	214.00	-149.84	217.05	0.00	
	4800.00	0.00	359.61	4779.69	214.00	-149.84	217.05	0.00	
	4900.00 5000.00	0.00 0.00	359.61 359.61	4879.69 4979.69	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	
	5100.00	0.00	359.61	4979.69 5079.69	214.00	-149.84	217.05	0.00	
	5200.00	0.00	359.61	5179.69	214.00	-149.84	217.05	0.00	
	5300.00	0.00	359.61	5279.69	214.00	-149.84	217.05	0.00	
	5400.00	0.00	359.61	5379.69	214.00	-149.84	217.05	0.00	
	5500.00 5559.31	0.00 0.00	359.61 359.61	5479.69 5539.00	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	Cherry Canyon
	5600.00	0.00	359.61	5579.69	214.00	-149.84	217.05	0.00	
	5700.00	0.00	359.61	5679.69	214.00	-149.84	217.05	0.00	
	5800.00	0.00	359.61	5779.69	214.00	-149.84	217.05	0.00	
	5900.00 6000.00	0.00	359.61 359.61	5879.69 5979.69	214.00 214.00	-149.84 -149.84	217.05	0.00	
	6000.00 6100.00	0.00 0.00	359.61 359.61	6079.69	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	
	6200.00	0.00	359.61	6179.69	214.00	-149.84	217.05	0.00	

darror		Well:	Cotton Dra	w Unit 653H					Geodetic System: US State Plane 1983
devon		County:	Lea						Datum: North American Datum 1927
			Permit Plan						Ellipsoid: Clarke 1866
		Design:	Permit Plar	1#1					Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
-	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
	6300.00 6400.00	0.00 0.00	359.61 359.61	6279.69 6379.69	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	
	6500.00	0.00	359.61	6479.69	214.00	-149.84	217.05	0.00	
	6600.00	0.00	359.61	6579.69	214.00	-149.84	217.05	0.00	
	6700.00	0.00	359.61	6679.69	214.00	-149.84	217.05	0.00	
	6800.00	0.00	359.61	6779.69	214.00	-149.84	217.05	0.00	
	6900.00 6997.31	0.00 0.00	359.61 359.61	6879.69 6977.00	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	Brushy Canyon
	7000.00	0.00	359.61	6979.69	214.00	-149.84	217.05	0.00	
	7100.00	0.00	359.61	7079.69	214.00	-149.84	217.05	0.00	
	7200.00	0.00	359.61	7179.69	214.00	-149.84	217.05	0.00	
	7300.00 7400.00	0.00 0.00	359.61 359.61	7279.69 7379.69	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	
	7500.00	0.00	359.61	7479.69	214.00	-149.84	217.05	0.00	
	7600.00	0.00	359.61	7579.69	214.00	-149.84	217.05	0.00	
	7700.00	0.00	359.61	7679.69	214.00	-149.84	217.05	0.00	
	7800.00	0.00	359.61	7779.69	214.00	-149.84	217.05	0.00	
	7900.00 8000.00	0.00 0.00	359.61 359.61	7879.69 7979.69	214.00 214.00	-149.84 -149.84	217.05 217.05	0.00 0.00	
	8100.00	0.00	359.61	8079.69	214.00	-149.84	217.05	0.00	
	8200.00	0.00	359.61	8179.69	214.00	-149.84	217.05	0.00	
	8300.00	0.00	359.61	8279.69	214.00	-149.84	217.05	0.00	
	8400.00 8500.00	0.00 0.00	359.61 359.61	8379.69 8479.69	214.00	-149.84 -149.84	217.05	0.00 0.00	
	8576.31	0.00	359.61	8556.00	214.00 214.00	-149.84	217.05 217.05	0.00	1st Bone Spring Lime / Point of Penetration
	8600.00	0.00	359.61	8579.69	214.00	-149.84	217.05	0.00	······································
	8700.00	0.00	359.61	8679.69	214.00	-149.84	217.05	0.00	
	8800.00	0.00	359.61	8779.69	214.00	-149.84	217.05	0.00	
	8862.38 8900.00	0.00 3.76	359.61 359.61	8842.07 8879.66	214.00 215.23	-149.84 -149.85	217.05 218.28	0.00 10.00	КОР
	9000.00	13.76	359.61	8978.37	230.45	-149.96	233.50	10.00	
	9100.00	23.76	359.61	9072.94	262.57	-150.18	265.62	10.00	
	9200.00	33.76	359.61	9160.49	310.63	-150.50	313.67	10.00	
	9300.00 9400.00	43.76 53.76	359.61 359.61	9238.36 9304.20	373.15 448.26	-150.93 -151.44	376.19 451.29	10.00 10.00	
	9500.00	63.76	359.61	9355.99	533.65	-152.02	536.67	10.00	
	9600.00	73.76	359.61	9392.17	626.74	-152.66	629.76	10.00	
	9700.00	83.76	359.61	9411.63	724.69	-153.32	727.71	10.00	
	9767.75 9800.00	90.54 90.54	359.61 359.61	9415.00 9414.70	792.32 824.57	-153.78 -154.00	795.33 827.57	10.00 0.00	Landing Point
	9900.00	90.54	359.61	9413.76	924.56	-154.68	927.56	0.00	
	10000.00	90.54	359.61	9412.82	1024.55	-155.36	1027.54	0.00	
	10100.00	90.54	359.61	9411.88	1124.55	-156.04	1127.53	0.00	
	10200.00 10300.00	90.54 90.54	359.61 359.61	9410.95 9410.01	1224.54 1324.53	-156.73 -157.41	1227.52 1327.50	0.00 0.00	
	10400.00	90.54	359.61	9409.07	1424.53	-158.09	1427.49	0.00	
	10500.00	90.54	359.61	9408.13	1524.52	-158.77	1527.47	0.00	
	10600.00	90.54	359.61	9407.20	1624.51	-159.45	1627.46	0.00	
	10700.00 10800.00	90.54 90.54	359.61 359.61	9406.26 9405.32	1724.50 1824.50	-160.13 -160.81	1727.45 1827.43	0.00 0.00	
	10900.00	90.54	359.61	9404.38	1924.49	-161.49	1927.42	0.00	
	11000.00	90.54	359.61	9403.45	2024.48	-162.17	2027.40	0.00	
	11100.00	90.54	359.61	9402.51	2124.48	-162.86	2127.39	0.00	
	11200.00 11300.00	90.54 90.54	359.61 359.61	9401.57 9400.63	2224.47 2324.46	-163.54 -164.22	2227.38 2327.36	0.00 0.00	
	11400.00	90.54	359.61	9399.69	2424.46	-164.90	2427.35	0.00	
	11500.00	90.54	359.61	9398.76	2524.45	-165.58	2527.33	0.00	
	11600.00	90.54	359.61	9397.82	2624.44	-166.26	2627.32	0.00	
	11700.00 11800.00	90.54 90.54	359.61 359.61	9396.88 9395.94	2724.44 2824.43	-166.94 -167.62	2727.31 2827.29	0.00 0.00	
	11900.00	90.54 90.54	359.61	9395.94 9395.01	2024.43 2924.42	-167.62	2927.29	0.00	
	12000.00	90.54	359.61	9394.07	3024.42	-168.99	3027.26	0.00	
	12100.00	90.54	359.61	9393.13	3124.41	-169.67	3127.25	0.00	
	12200.00	90.54	359.61	9392.19	3224.40	-170.35	3227.24	0.00	
	12300.00 12400.00	90.54 90.54	359.61 359.61	9391.26 9390.32	3324.40 3424.39	-171.03 -171.71	3327.22 3427.21	0.00 0.00	
	12500.00	90.54	359.61	9389.38	3524.38	-172.39	3527.19	0.00	
	12600.00	90.54	359.61	9388.44	3624.38	-173.07	3627.18	0.00	
	12700.00	90.54	359.61	9387.51	3724.37	-173.75	3727.17	0.00	
	12800.00	90.54	359.61	9386.57	3824.36	-174.44	3827.15	0.00	

·									
=		101-11	Cotton D	w Heit CENT					Goodotic Sustamy LIC State Diana 1002
devon		Well: County:		w Unit 653H					Geodetic System: US State Plane 1983 Datum: North American Datum 1927
		-	Lea Permit Plar	1					Ellipsoid: Clarke 1866
			Permit Plar						Zone: 3001 - NM East (NAD83)
		-							
	MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
-	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
	12900.00 13000.00	90.54 90.54	359.61 359.61	9385.63 9384.69	3924.36 4024.35	-175.12 -175.80	3927.14 4027.12	0.00 0.00	
	13100.00	90.54	359.61	9383.75	4124.34	-176.48	4127.11	0.00	
	13200.00	90.54	359.61	9382.82	4224.34	-177.16	4227.10	0.00	
	13300.00	90.54	359.61	9381.88	4324.33	-177.84	4327.08	0.00	
	13400.00	90.54	359.61	9380.94	4424.32	-178.52	4427.07	0.00	
	13500.00 13600.00	90.54 90.54	359.61 359.61	9380.00 9379.07	4524.32 4624.31	-179.20 -179.89	4527.05 4627.04	0.00 0.00	
	13700.00	90.54	359.61	9378.13	4724.30	-180.57	4027.04	0.00	
	13800.00	90.54	359.61	9377.19	4824.30	-181.25	4827.01	0.00	
	13900.00	90.54	359.61	9376.25	4924.29	-181.93	4927.00	0.00	
	14000.00	90.54	359.61	9375.32	5024.28	-182.61	5026.98	0.00	
	14100.00	90.54	359.61	9374.38	5124.28	-183.29	5126.97	0.00	
	14200.00 14300.00	90.54 90.54	359.61 359.61	9373.44 9372.50	5224.27 5324.26	-183.97 -184.65	5226.96 5326.94	0.00 0.00	
	14400.00	90.54	359.61	9371.57	5424.26	-185.33	5426.93	0.00	
	14500.00	90.54	359.61	9370.63	5524.25	-186.02	5526.91	0.00	
	14600.00	90.54	359.61	9369.69	5624.24	-186.70	5626.90	0.00	
	14700.00	90.54	359.61	9368.75	5724.24	-187.38	5726.89	0.00	
	14800.00	90.54	359.61	9367.81	5824.23	-188.06	5826.87	0.00	
	14900.00 15000.00	90.54 90.54	359.61 359.61	9366.88 9365.94	5924.22 6024.22	-188.74 -189.42	5926.86 6026.84	0.00 0.00	
	15100.00	90.54	359.61	9365.00	6124.21	-190.10	6126.83	0.00	
	15200.00	90.54	359.61	9364.06	6224.20	-190.78	6226.82	0.00	
	15300.00	90.54	359.61	9363.13	6324.20	-191.46	6326.80	0.00	
	15400.00	90.54	359.61	9362.19	6424.19	-192.15	6426.79	0.00	
	15500.00 15600.00	90.54 90.54	359.61 359.61	9361.25 9360.31	6524.18 6624.18	-192.83 -193.51	6526.77 6626.76	0.00 0.00	
	15700.00	90.54	359.61	9359.38	6724.17	-193.31	6726.75	0.00	
	15800.00	90.54	359.61	9358.44	6824.16	-194.87	6826.73	0.00	
	15900.00	90.54	359.61	9357.50	6924.16	-195.55	6926.72	0.00	
	16000.00	90.54	359.61	9356.56	7024.15	-196.23	7026.70	0.00	
	16100.00	90.54	359.61	9355.63	7124.14	-196.91 -197.60	7126.69	0.00 0.00	
	16200.00 16300.00	90.54 90.54	359.61 359.61	9354.69 9353.75	7224.14 7324.13	-197.60	7226.68 7326.66	0.00	
	16400.00	90.54	359.61	9352.81	7424.12	-198.96	7426.65	0.00	
	16500.00	90.54	359.61	9351.87	7524.12	-199.64	7526.63	0.00	
	16600.00	90.54	359.61	9350.94	7624.11	-200.32	7626.62	0.00	
	16700.00	90.54	359.61	9350.00	7724.10	-201.00	7726.61	0.00	
	16800.00 16900.00	90.54 90.54	359.61 359.61	9349.06 9348.12	7824.10 7924.09	-201.68 -202.36	7826.59 7926.58	0.00 0.00	
	17000.00	90.54	359.61	9347.19	8024.08	-203.04	8026.56	0.00	
	17100.00	90.54	359.61	9346.25	8124.08	-203.73	8126.55	0.00	
	17200.00	90.54	359.61	9345.31	8224.07	-204.41	8226.54	0.00	
	17300.00	90.54	359.61	9344.37	8324.06	-205.09	8326.52	0.00	
	17400.00	90.54	359.61	9343.44	8424.05	-205.77	8426.51	0.00	
	17500.00 17600.00	90.54 90.54	359.61 359.61	9342.50 9341.56	8524.05 8624.04	-206.45 -207.13	8526.49 8626.48	0.00 0.00	
	17700.00	90.54 90.54	359.61	9340.62	8724.04	-207.13	8726.47	0.00	
	17800.00	90.54	359.61	9339.69	8824.03	-208.49	8826.45	0.00	
	17900.00	90.54	359.61	9338.75	8924.02	-209.18	8926.44	0.00	
	18000.00	90.54	359.61	9337.81	9024.01	-209.86	9026.42	0.00	
	18100.00 18200.00	90.54 90.54	359.61 359.61	9336.87 9335.93	9124.01 9224.00	-210.54 -211.22	9126.41 9226.40	0.00 0.00	
	18200.00	90.54 90.54	359.61	9335.00 9335.00	9224.00 9323.99	-211.22	9226.40 9326.38	0.00	
	18400.00	90.54	359.61	9334.06	9423.99	-212.58	9426.37	0.00	
	18500.00	90.54	359.61	9333.12	9523.98	-213.26	9526.35	0.00	
	18600.00	90.54	359.61	9332.18	9623.97	-213.94	9626.34	0.00	
	18700.00	90.54	359.61	9331.25	9723.97	-214.62	9726.33	0.00	
	18800.00 18900.00	90.54 90.54	359.61 359.61	9330.31 9329.37	9823.96 9923.95	-215.31 -215.99	9826.31 9926.30	0.00 0.00	
	18900.00	90.54 90.54	359.61	9329.37 9328.43	9923.95 10023.95	-215.99	10026.28	0.00	
	19100.00	90.54	359.61	9327.50	10123.94	-217.35	10126.27	0.00	
	19200.00	90.54	359.61	9326.56	10223.93	-218.03	10226.26	0.00	
	19300.00	90.54	359.61	9325.62	10323.93	-218.71	10326.24	0.00	
	19400.00	90.54	359.61	9324.68	10423.92	-219.39	10426.23	0.00	
	19500.00 19600.00	90.54 90.54	359.61 359.61	9323.75 9322.81	10523.91 10623.91	-220.07 -220.76	10526.21 10626.20	0.00 0.00	
	19600.00 19604.73	90.54 90.54	359.61	9322.81	10623.91	-220.76	10626.20	0.00	exit
	19684.73	90.54	359.61	9322.00	10708.63	-221.28	10710.92	0.00	BHL

levon		County: Wellbore:	Lea						Datum: Ellipsoid:	US State Plane 1983 North American Datum 1927 Clarke 1866 3001 - NM East (NAD83)
_	MD (ft)	<b>INC</b> (°)	<b>AZI</b> (°)	TVD (ft)	NS (ft)	<b>EW</b> (ft)	<b>VS</b> (ft)	DLS (°/100ft)	Comment	

	County: Wellbore:							Datum: Ellipsoid:	US State Plane 1983 North American Datum 1927 Clarke 1866 3001 - NM East (NAD83)
MD (ft)	<b>INC</b> (°)	<b>AZI</b> (°)	TVD (ft)	NS (ft)	EW (ft)	<b>VS</b> (ft)	<b>DLS</b> (°/100ft)	Comment	

#### 1. Geologic Formations

TVD of target	9323	Pilot hole depth	N/A
MD at TD:	19685	Deepest expected fresh water	

Basin

Formation	Depth (TVD)	Water/Mineral Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	782		
Salt	1148		
Base of Salt	4348		
Delaware	4570		
Cherry Canyon	5539		
Brushy Canyon	6977		
1st Bone Spring Lime	8556		

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

		Wt			Casing	Interval	Casing Interval	
Hole Size	Csg. Size	(PPF)	Grade Conn		From (MD)	To (MD)	From (TVD)	To (TVD)
17 1/2	13 3/8	54 1/2	J-55	BTC	0	807	0	807
12 1/4	9 5/8	40	J-55	BTC	0	8762	0	8762
8 3/4	5 1/2	17	P110	DWC/C-IS PLUS	0	19685	0	9323

#### 2. Casing Program (Primary Design)

•All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.

#### 3. Cementing Program (Primary Design)

Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures.

Casing	# Sks	тос	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	623	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	1228	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
Int I	511	6997	13.2	1.44	Tail: Class H / C + additives
Production	44	8362	9	3.27	Lead: Class H /C + additives
Production	2088	8862	13.2	1.44	Tail: Class H / C + additives

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Prod	10%

.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Tyj	ре	~	Tested to:
			Annı	ular	X	50% of rated working pressure
Int 1	13-5/8"	5M	Blind		Х	
Int I	15 5/0	5111	Pipe l	Ram		- 5M
			Double	e Ram	Х	5101
			Other*			<u>]                                    </u>
			Annular (5M)		X	50% of rated working pressure
Production	13-5/8"	5M	Blind Ram		X	
Troduction		5101	Pipe Ram Double Ram			- 5M
					Х	5101
			Other*			
			Annular (5M)			
			Blind	Blind Ram		
			Pipe Ram			]
			Double	e Ram		]
			Other*			
N A variance is requested for	the use of a	a diverter on	the surface c	casing. See a	attached for s	schematic.
Y A variance is requested to r	un a 5 M a	nnular on a	10M system			

#### 4. Pressure Control Equipment (Three String Design)

#### 5. Mud Program (Three String Design)

Section	Туре	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Production	OBM	10-10.5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
---	-----------------------------

#### 6. Logging and Testing Procedures

Logging, Coring and Testing						
	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the					
Х	Completion Report and sbumitted to the BLM.					
	No logs are planned based on well control or offset log information.					
	Drill stem test? If yes, explain.					
	Coring? If yes, explain.					

Addition	al logs planned	Interval
	Resistivity	Int. shoe to KOP
	Density	Int. shoe to KOP
Х	CBL	Production casing
Х	Mud log	Intermediate shoe to TD
	PEX	

#### 7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	5090
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogren Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations<br/>greater than 100 ppm, the operator will comply with the provisions of 43 CFR 3176. If Hydrogen Sulfide is encountered<br/>measured values and formations will be provided to the BLM.NH2S is present

Y H2S plan attached.

#### 8. Other facets of operation

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).

 $^{3}$  The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.

- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

#### Attachments

X Directional Plan Other, describe

## **Received by OCD: 1/25/2024 5:34:57 AM** Sundry ID 2766943 Cotton Draw Unit 653H

#### Cotton Draw Unit 653H

13 3/8		face csg in a	17 1/2 iı	nch hole.		Design				Surface		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weigh
"A"	54.50		j 55	btc	17.02	2.63	0.57	920	7	0.96	4.96	50,14
"B"				btc				0				0
omnarison of		'g mud, 30min Sfc Csg Test nimum Required Cem		Tail Cmt	does not	circ to sfc.	Totals:	920				50,14
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Reg'd				Min Di
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cr
17 1/2	0.6946	623	897	639	40	9.00	2852	3M				1.56
urst Frac Grad	ient(s) for Segme	nt(s) A, B = , b All > 0.	70, OK.									
9 5/8		ng inside the	13 3/8			<u>Design</u>				Int 1		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weigh
"A"	40.00		j 55	btc	2.11	0.54	0.78	8,762	1	1.30	0.90	,
"B"								0				0
	w/8.4#/	g mud, 30min Sfc Csg Test					Totals:	8,762				350,48
11-1-	• • • • • • •			ed to achieve a top of	0	ft from su		920				overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Di
Size 12 1/4	Volume 0.3132	Cmt Sx 511	CuFt Cmt 736	Cu Ft 2790	% Excess	Mud Wt 10.50	MASP 3034	BOPE 5M				Hole-Cp 0.81
12 1/4 D V Tool(s):	0.3132	511	6977	2790	-74	10.50	SU34 sum of sx	<u>Σ CuFt</u>				U.81 Σ%exce
J V 1001(S):							1739	3560				2 /// 28
viotogo 0/ i												20
lass 'C' tail cmt urst Frac Gradi		32 nt(s): A, B, C, D = 0.45, b	27 o, c, d <0.70 a Problem	m!!								
lass 'C' tail cmt urst Frac Grad Tail cmt 5 1/2	ient(s) for Segme casir	nt(s): A, B, C, D = 0.45, t				Design Fac	<u>ctors</u>			Prod 1		
lass 'C' tail cmt urst Frac Gradi Tail cmt 5 1/2 Segment	ient(s) for Segmer casir #/ft	nt(s): A, B, C, D = 0.45, t	o, c, d <0.70 a Problem 9 5/8	Coupling	Joint	Collapse	<u>ctors</u> Burst	Length	B@s	a-B	a-C	
lass 'C' tail cmt urst Frac Gradi Tail cmt 5 1/2 Segment "A"	ient(s) for Segme casir	nt(s): A, B, C, D = 0.45, t	o, c, d <0.70 a Problem		Joint 3.44		<u>ctors</u>	<b>Length</b> 19,685	<b>B@s</b> 2		<b>a-C</b> 2.47	334,64
lass 'C' tail cmt urst Frac Gradi Tail cmt 5 1/2 Segment "A" "B"	ient(s) for Segmer casir #/ft	nt(s): A, B, C, D = 0.45, t	o, c, d <0.70 a Problem 9 5/8	Coupling		Collapse	<u>ctors</u> Burst	Length 19,685 0		a-B		334,64 <b>0</b>
lass 'C' tail cmt urst Frac Gradi Tail cmt 5 1/2 Segment "A" "B" "C"	ient(s) for Segmer casir #/ft	nt(s): A, B, C, D = 0.45, t	o, c, d <0.70 a Problem 9 5/8	Coupling dwc/c is+		Collapse	<u>ctors</u> Burst	Length 19,685 0 0		a-B		334,64 <b>0</b> 0
lass 'C' tail cmt urst Frac Gradi Tail cmt 5 1/2 Segment "A" "B"	casir #/ft 17.00	nt(s): A, B, C, D = 0.45, b g inside the Grade	p, c, d <0.70 a Problem 9 5/8 p 110	Coupling		Collapse	ctors Burst 2.09	Length 19,685 0 0 0		a-B		334,64 0 0 0
Tail cmt Tail cmt 5 1/2 Segment "A" "B" "C"	casir #/ft 17.00	nt(s): A, B, C, D = 0.45, t g inside the Grade 'g mud, 30min Sfc Csg Test	p, c, d <0.70 a Problem 9 5/8 p 110	Coupling dwc/c is+	3.44	Collapse 1.47	ctors Burst 2.09 Totals:	Length 19,685 0 0 0 19,685		a-B	2.47	334,64 0 0 334,64
lass 'C' tail cmt urst Frac Gradi Tail cmt 5 1/2 Segment "A" "B" "C" "D"	ient(s) for Segmen casin #/ft 17.00 w/8.4#/	nt(s): A, B, C, D = 0.45, t g inside the Grade 'g mud, 30min Sfc Csg Test The cement t	p, c, d <0.70 a Problem 9 5/8 p 110 p sig: 2,051 volume(s) are intended	Coupling dwc/c is+ 0 ed to achieve a top of	3.44 8562	Collapse 1.47 ft from su	ctors Burst 2.09 Totals: rface or a	Length 19,685 0 0 19,685 200		a-B	2.47	334,64 0 0 334,64 overlap.
Jass 'C' tail cmt urst Frac Grad 5 1/2 Segment "A" "B" "C" "D" Hole	ent(s) for Segmer casir #/ft 17.00 w/8.4#/ Annular	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement v 1 Stage	p, c, d <0.70 a Problem 9 5/8 p 110 p sig: 2,051 volume(s) are intende 1 Stage	Coupling dwc/c is+ 0 ed to achieve a top of Min	3.44 8562 1 Stage	Collapse 1.47 ft from su Drilling	ctors Burst 2.09 Totals:	Length 19,685 0 0 19,685 200 Req'd		a-B	2.47	334,64 0 0 334,64 overlap. Min Dis
Tais 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size	casir #/ft 17.00 w/8.4#/ Annular Volume	nt(s): A, B, C, D = 0.45, t g inside the Grade 'g mud, 30min Sfc Csg Test The cement t	p, c, d <0.70 a Problem 9 5/8 p 110 p p 110 polymer(s) are intende 1 Stage CuFt Cmt	Coupling dwc/c is+ 0 ed to achieve a top of	3.44 8562	Collapse 1.47 ft from su Drilling Mud Wt	ctors Burst 2.09 Totals: rface or a Calc	Length 19,685 0 0 19,685 200		a-B	2.47	334,64 0 0 334,64 overlap. Min Dis Hole-Cp
Tail cmt 51/2 Segment "A" "C" "D" Hole	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx	p, c, d <0.70 a Problem 9 5/8 p 110 p sig: 2,051 volume(s) are intende 1 Stage	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft	3.44 8562 1 Stage % Excess	Collapse 1.47 ft from su Drilling	ctors Burst 2.09 Totals: rface or a Calc	Length 19,685 0 0 19,685 200 Req'd		a-B	2.47	0 <b>0</b> 334,64
Class 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 Class 'C' tail cmt	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx	p, c, d <0.70 a Problem 9 5/8 p 110 p p 110 polymer(s) are intende 1 Stage CuFt Cmt	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft	3.44 8562 1 Stage % Excess	Collapse 1.47 ft from su Drilling Mud Wt	ctors Burst 2.09 Totals: rface or a Calc	Length 19,685 0 0 19,685 200 Req'd		a-B	2.47	334,64 0 0 334,64 overlap. Min Dis Hole-Cp
lass 'C' tail cmt turst Frac Gradi Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 lass 'C' tail cmt #N/A	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx	p, c, d <0.70 a Problem 9 5/8 p 110 : psig: 2,051 volume(s) are intende 1 Stage CuFt Cmt 3151	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft	3.44 8562 1 Stage % Excess	Collapse 1.47 ft from su Drilling Mud Wt 10.50	Ctors Burst 2.09 Totals: rface or a Calc MASP	Length 19,685 0 0 19,685 200 Req'd	2	<b>a-B</b> 3.51	2.47	334,64 0 0 334,64 overlap. Min Dis Hole-Cp
Tais 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 class 'C' tail cmt #N/A 0	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx	p, c, d <0.70 a Problem 9 5/8 p 110 p p 110 polymer(s) are intende 1 Stage CuFt Cmt	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft	3.44 8562 1 Stage % Excess	Collapse 1.47 ft from su Drilling Mud Wt	Ctors Burst 2.09 Totals: rface or a Calc MASP	Length 19,685 0 0 19,685 200 Req'd	2	a-B	2.47	334,64 0 0 334,64 overlap. Min Dis Hole-Cp
Tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 lass 'C' tail cmt #N/A 0	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526 ; yld > 1.35	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2132	p, c, d <0.70 a Problem 9 5/8 p 110 : psig: 2,051 volume(s) are intende 1 Stage CuFt Cmt 3151	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft 2811	3.44 8562 1 Stage % Excess 12	Collapse 1.47 ft from su Drilling Mud Wt 10.50 Design	Ctors Burst 2.09 Totals: rface or a Calc MASP Factors	Length 19,685 0 0 19,685 200 Req'd BOPE	2	a-B 3.51	2.47	334,64 0 0 334,64 overlap. Min Dis Hole-Cp 1.35
Lass 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 Lass 'C' tail cmt #N/A 0 Segment	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526 ; yld > 1.35	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2132	p, c, d <0.70 a Problem 9 5/8 p 110 : psig: 2,051 volume(s) are intende 1 Stage CuFt Cmt 3151	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft 2811 Coupling	3.44 8562 1 Stage % Excess 12	Collapse 1.47 ft from su Drilling Mud Wt 10.50 Design	Ctors Burst 2.09 Totals: rface or a Calc MASP Factors	Length 19,685 0 0 19,685 200 Req'd BOPE	2	a-B 3.51	2.47	334,64 0 0 334,64 overlap. Min Dis Hole-Cp 1.35
Lass 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 Lass 'C' tail cmt #N/A 0 Segment "A"	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526 : yld > 1.35 #/ft	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2132	p, c, d <0.70 a Problem 9 5/8 p 110 psig: 2,051 volume(s) are intende 1 Stage CuFt Cmt 3151	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft 2811 Coupling 0.00	3.44 8562 1 Stage % Excess 12	Collapse 1.47 ft from su Drilling Mud Wt 10.50 Design	Ctors Burst 2.09 Totals: rface or a Calc MASP Factors	Length 19,685 0 0 19,685 200 Req'd BOPE	2	a-B 3.51	2.47	334,64 0 0 334,64 overlap. Min Di: Hole-Cf 1.35 Weigl
Lass 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 Lass 'C' tail cmt #N/A 0 Segment "A"	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526 : yld > 1.35 #/ft	nt(s): A, B, C, D = 0.45, I ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx 2132 Grade 'g mud, 30min Sfc Csg Test	p, c, d <0.70 a Problem 9 5/8 p 110 psig: 2,051 volume(s) are intended 1 Stage CuFt Cmt 3151 5 1/2	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft 2811 Coupling 0.00	3.44 8562 1 Stage % Excess 12	Collapse 1.47 ft from su Drilling Mud Wt 10.50 Design	Ctors Burst 2.09 Totals: rface or a Calc MASP Factors Burst Totals:	Length 19,685 0 0 19,685 200 Req'd BOPE	2	a-B 3.51	2.47 ing> a-C	334,64 0 0 334,64 overlap. Min Di: Hole-Cp 1.35 Weigl 0 0
Tass 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 class 'C' tail cmt #N/A 0 Segment "A" "B" Hole	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526 : yld > 1.35 #/ft	nt(s): A, B, C, D = 0.45, I ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx 2132 Grade 'g mud, 30min Sfc Csg Test	p, c, d <0.70 a Problem 9 5/8 p 110 p p 110 p sig: 2,051 volume(s) are intended 1 Stage CuFt Cmt 3151 5 1/2 p sig: alc below includes th 1 Stage	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft 2811 Coupling 0.00 0.00 is csg, TOC intended Min	3.44 8562 1 Stage % Excess 12 #N/A #N/A 1 Stage	Collapse 1.47 ft from su Drilling Mud Wt 10.50 <u>Design I</u> Collapse ft from su Drilling	Ctors Burst 2.09 Totals: rface or a Calc MASP Factors Burst Totals: rface or a Calc	Length 19,685 0 0 19,685 200 Req'd BOPE Length 0 0 0 #N/A Req'd	2	a-B 3.51	2.47 ing> a-C	334,64 0 0 334,64 overlap. Min Dis Hole-Cp 1.35 Weigh 0 0 0 0 0 0 0 0
Jass 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 class 'C' tail cmt #N/A 0 Segment "A" "B" Hole Size 8 3/4 C' tail cmt	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526 cyld > 1.35 #/ft w/8.4#/	nt(s): A, B, C, D = 0.45, t ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx 2132 Grade 'g mud, 30min Sfc Csg Test Cmt vol cz 1 Stage Cmt Sx	p, c, d <0.70 a Problem 9 5/8 p 110 p 110 projume(s) are intended 1 Stage CuFt Cmt 3151 5 1/2 proje: alc below includes th 1 Stage CuFt Cmt	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft 2811 Coupling 0.00 0.00 is csg, TOC intended Min Cu Ft	3.44 8562 1 Stage % Excess 12 #N/A #N/A 1 Stage % Excess	Collapse 1.47 ft from su Drilling Mud Wt 10.50 <u>Design I</u> Collapse ft from su	Ctors Burst 2.09 Totals: rface or a Calc MASP Factors Burst Totals: rface or a	Length 19,685 0 0 19,685 200 Req'd BOPE	2	a-B 3.51	2.47 ing> a-C	334,64 0 0 334,64 overlap. Min Dis Hole-Cp 1.35 Weigh 0 0 0
lass 'C' tail cmt Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 8 3/4 lass 'C' tail cmt #N/A 0 Segment "A" "B" Hole	casir #/ft 17.00 w/8.4#/ Annular Volume 0.2526 cyld > 1.35 #/ft w/8.4#/ Annular	nt(s): A, B, C, D = 0.45, H ng inside the Grade 'g mud, 30min Sfc Csg Test The cement of 1 Stage Cmt Sx 2132 Grade 'g mud, 30min Sfc Csg Test Cmt vol ca 1 Stage	p, c, d <0.70 a Problem 9 5/8 p 110 p p 110 p sig: 2,051 volume(s) are intended 1 Stage CuFt Cmt 3151 5 1/2 p sig: alc below includes th 1 Stage	Coupling dwc/c is+ 0 ed to achieve a top of Min Cu Ft 2811 Coupling 0.00 0.00 is csg, TOC intended Min Cu Ft 0	3.44 8562 1 Stage % Excess 12 #N/A #N/A 1 Stage	Collapse 1.47 ft from su Drilling Mud Wt 10.50 <u>Design I</u> Collapse ft from su Drilling	Ctors Burst 2.09 Totals: rface or a Calc MASP Factors Burst Totals: rface or a Calc	Length 19,685 0 0 19,685 200 Req'd BOPE Length 0 0 0 #N/A Req'd	2	a-B 3.51	2.47 ing> a-C	334,64 0 0 334,64 overlap. Hole-Cp 1.35 Weigh 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

.

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company LP
	NMLC061869
LOCATION:	Section 28, T.25 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Cotton Draw Unit 653H
SURFACE HOLE FOOTAGE:	175'/N & 815'/E
<b>BOTTOM HOLE FOOTAGE</b>	20'/N & 990'/E
ATS/API ID:	3002548722
APD ID:	10400039125
Sundry ID:	2766943

### COA

H2S	Yes 🔽		
Potash	None 🔽		
Cave/Karst Potential	Low		
Cave/Karst Potential	Critical		
Variance	C None	🖸 Flex Hose	C Other
Wellhead	Conventional and Multibow	/I 👤	
Other	□ 4 String	Capitan Reef	□ WIPP
		None	
Other	Pilot Hole	Open Annulus	
	None 🔻		
Cementing	Contingency Squeeze	Echo-Meter	Primary Cement
	None 🔫	Int 1 🗾	Squeeze
			None 🚽
Special	□ Water	COM	☑ Unit
Requirements	Disposal/Injection		
Special	Batch Sundry		
Requirements			
Special	Break Testing	□ Offline	$\Box$ Casing
Requirements		Cementing	Clearance
Variance			

#### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

#### **B.** CASING

- 1. The 13-3/8 inch surface casing shall be set at approximately 920 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be 17 1/2 inch in diameter.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8</u> <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

## Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

#### **Option 1 (Single Stage):**

• Cement to surface. If cement does not circulate see B.1.a, c-d above.

#### **Option 2:**

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

- a. First stage: Operator will cement with intent to reach the top of the Brushy Canyon at 6977' (511 sxs Class H/C+ additives).
- b. Second stage:
  - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. (Squeeze 1228 sxs Class C)

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus after primary cementing stage. <u>Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 9-5/8" casing to surface after the second stage BH to verify TOC.</u>

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

## Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.
     Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

#### C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

### **Option 1:**

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi. Annular which shall be tested to 3500 (70% Working Pressure) psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

#### **Option 2:**

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

#### **D. SPECIAL REQUIREMENT (S)**

#### <u>Unit Wells</u>

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

#### **Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months.

#### **BOPE Break Testing Variance (Approved)**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.

- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **21**-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR part 3170 Subpart 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

## **GENERAL REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
  - Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43** CFR part **3170** Subpart **3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator

can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24</u> <u>hours</u>. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- B. PRESSURE CONTROL

- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-

off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170 Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR part 3170 Subpart 3172.
- C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

#### D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

LVO 1/11/2024

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720 District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	307553
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

#### CONDITIONS

Created By		Condition Date
pkautz	None	2/14/2024

Page 33 of 33

Action 307553